



SITE DESIGN ENGINEERING, LLC.

11 Cushman Street, Middleboro, MA 02346
P: 508-967-0673 F: 508-967-0674

May 26, 2021

SDE No. 16172

Town of Freetown Planning Board
3 North Main Street
Freetown, MA 02702

Re: Engineering Review – Braley Road
Commercial Site Development

Dear Board Members,

Site Design Engineering, LLC (SDE) has prepared a response letter addressing the comments in a letter prepared by Environmental Partners., dated December 11, 2018 for the above referenced application. A brief response and reference to each comment is provided below for your review.

Conformance with Subdivision Rules and Regulations

1. IV.D.2.d – The Applicant has proposed the use of flared end outlets

The Applicant will be requesting a waiver from the Planning Board.

2. IV.D.2.e – The minimum pipe diameter shall be 12-inches...

The Applicant will be requesting a waiver from the Planning Board.

3. IV.D.2.e – The Applicant has should note on Plan Set that all proposed drainage

A note was added on sheet 4, 5 and 8 of the Plan Set requiring the use of concrete pipe.

4. IV.D.2.h – The Applicant should provide detailed calculations for sizing the vegetated.....

The vegetated swale is no longer a component of the revised stormwater drainage system.

5. IV.D.2.m.4.a – A twenty foot (20') gravel access road is required to be provided

The Applicant will be requesting a waiver from the Planning Board to utilize a 10-foot wide gravel maintenance access road.

6. IV.D.2.m.4.b – The Plan Set shall include sufficient information to verify the access road

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Note added on the drainage plan and the proper construction detail is added on sheet 9 of the Plan Set.

7. IV.D.2.m.5 – The Applicant has proposed a detention basin with side slopes of

The Applicant will be requesting a waiver from the Planning Board.

8. IV.D.2.m.6 – Detention Basins are required to have fifty foot (50') natural vegetated

The Applicant will be requesting a waiver from the Planning Board.

9. IV.D.2.m.7 – Detention Basins are required to have one foot (1') of freeboard over

The detention system is redesigned to provide 1-ft of freeboard over the spillway 100-yr storm flood elevation.

10. IV.D.2.m.11 – The detention pond and drainage facilities are typically required to be

The Applicant will be requesting a waiver from the Planning Board. The applicant is the owner of the entire property and therefore does not require an easement.

11. IV.D.3.n – Rip-rap shall be supplied at all outfall and emergency spillway

Rip-rap was added at the outfall, spillway, and downstream of the outfall.

12. IV.D.2.o – The portion of the pipe segment between CB2 and DMH2 does not meet

The Applicant will be requesting a waiver from the Planning Board to allow 2-feet of cover.

13. IV.D.4 – Lots shall be prepared and graded in such a manner that development of

The drainage system outfall was relocated and is now over 200-feet away from abutting parcels. This increased distance will disperse discharge flow and minimize impact over land across lot lines.

14. IV.D.5 – The Applicant should confirm that the proposed manhole covers and catch

Construction detail of the drain manhole and catch basin are modified to specify the requirements for manhole cover, frame, and grate.

Stormwater Management

1. The Applicant should provide labels for the time of concentration path, justifying

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Labels are added on the time of concentrations paths on the predevelopment and post-development watershed plans as requested.

2. The Applicant should note that the Massachusetts Supplement for the TR-55

Subcatchments with time of concentration (Tc) path across smooth surface are evaluated with a Tc minimum value of 0.1 hours (6 min.) per Massachusetts Supplement for the TR-55 Hydrology Procedure.

3. Standard 3 - The Applicant relies on the proposed detention basin to provide

The drainage system stormwater storage is redesigned as an infiltration basin to provide groundwater recharge.

4. Standard 3 - The Applicant should confirm whether the proposed buildings will have

The buildings will have metal roofs. Stormwater runoff from the roofs is directed to planted treatment basins numbers one and two. Overflow from the basins is directed partially to an abutting drainage system on Braley Road as well as the proposed stormwater basins on the west side of the property.

5. Standard 4 - The Applicant should submit a Long Term Pollution Prevention Plan

A Stormwater Best Management Practices Operation and Maintenance Plan was prepared and attached for review.

6. Standard 4 - The Applicant relies on the proposed "vegetated swale" to contribute to

The vegetated swale is no longer a component of the revised stormwater drainage system. A sediment forebay is proposed as pretreatment prior to the infiltration basin.

7. Standard 5 - The Applicant should specify the intended use of the two warehouse

The buildings are proposed to be used as contractor storage areas. No uses are proposed or anticipated that would generate higher potential pollution loads.

8. Standard 6 - The proposed site is located within an Outstanding Resource Water,

The proposed stormwater system provides the required treatment levels for property located in an Outstanding Resource Water. The stormwater system utilizes multiple BMP's including deep sump hooded catch basins, sediment forebays, roof treatment basins, vegetated overland flow and an infiltration basin. Water quality volumes are calculated to meet or exceed the 1" requirement.

9. Standard 8 - The proposed project includes more than one acre of disturbance.....

The applicant will prepare and file the required SWPPP prior to the start of site construction.

10. Standard 8 - The BMP's used during construction must be different from the BMP's

The BMP's utilized during construction will be the same as those for post-construction with the exception of the infiltration bason. All BMP's will be required to be cleaned and restored following completion of construction activities per the operation and maintenance plan.

11. Standard 9 - The Applicant should provide a drawing showing all the best

A drawing is included that indicates the best management practices utilized. Snow removal disposal area locations are also indicated on the site plan.

12. Standard 9 - The Long-Term Operation and Maintenance Plan shall include

The plan contains language requiring notification of stormwater systems during property transfers.

13. Standard 9 - The Long-Term Operation and Maintenance Plan must include

This is included within the plan.

14. Standard 9 - The Long-Term Operation and Maintenance Plan shall include

This is included within the plan.

15. Standard 9 - The Applicant should specify Operation and Maintenance protocols

This is included within the plan.

16. Catch basins should be designed in accordance with the Massachusetts Stormwater

The catch basin construction detail was revised to specify the required 4-ft. sump.

17. The Applicant should design the proposed Detention Basin in accordance with

The stormwater system is designed in accordance with 302 CMR 10.00 to the extent it is applicable.

General Comments

1. The Applicant should show the limit of disturbance line on the plans. No work,

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The limit of disturbance delineation is indicated on the Erosion Control Plan sheet 6 of the Plan Set. The limit of disturbance generally corresponds to the location of the proposed erosion control barrier.

2. The Applicant should confirm and correct conflicting pipe diameters on the Plan Set.....

Conflicting pipe sizes and respective labels, notably CB#1 and DMH#1, are checked and revised accordingly on sheet 4 and on other sheets on the Plan Set where drainage structures are shown.

3. The Applicant should confirm and correct numbering of Drain Manholes on the

Drainage Structure labels, notably DMH#2, are checked and revised accordingly on sheet 4 and on other sheets on the Plan Set where drainage structures are shown.

4. The Applicant should confirm and correct conflicting values of impervious area.....

The impervious areas are identified in the reports are noted for specific calculations as follow, entire site pavement area is 46,100 sf, impervious area of 56,920 sf flow to the sediment forebay and the total site impervious area is 70,850 sf.

5. The Applicant has provided a detail for both a "Nyloplast Drain Basin Manhole" and

Precast concrete drain manholes will be utilized on site and references to the Nyloplast strcutres were removed.

6. The Applicant has indicated on the Plan Set and the HydroCad model that the top of

The revised infiltration basin elevation contours indicate proper top of basin contour attributes and overflow spillway elevations.

7. The Applicant should confirm whether the contours on the east side of the proposed

The revised infiltration basin elevation contours and the proposed sediment forebay side slopes are labeled and shown accordingly on the revised plan set.

Suggested Conditions

1. The proposed project includes more than one acre of disturbance. Therefore, the.....

The applicant will prepare and file the required NPDES SWPPP prior to the start of construction.

If you have any additional questions on this matter please contact me @ (508) 503-3500 or dmulloy@sde-ldec.com.

Respectfully,
Site Design Engineering, LLC.

A handwritten signature in black ink, appearing to read "Daniel C. Mulloy". The signature is fluid and cursive, with a stylized "D" and "M".

Daniel C. Mulloy, P.E.
President/Manager

enclosures

cc: Adam S. Kran, P.E. , Environmental Partners Group, Inc.
Keven V. Desmarais , Board Member Chairman
MICHKEV RE, LLC

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